OIPE IAP17 FEB 17 2006 PATENT & TRADEMARK OFFICE

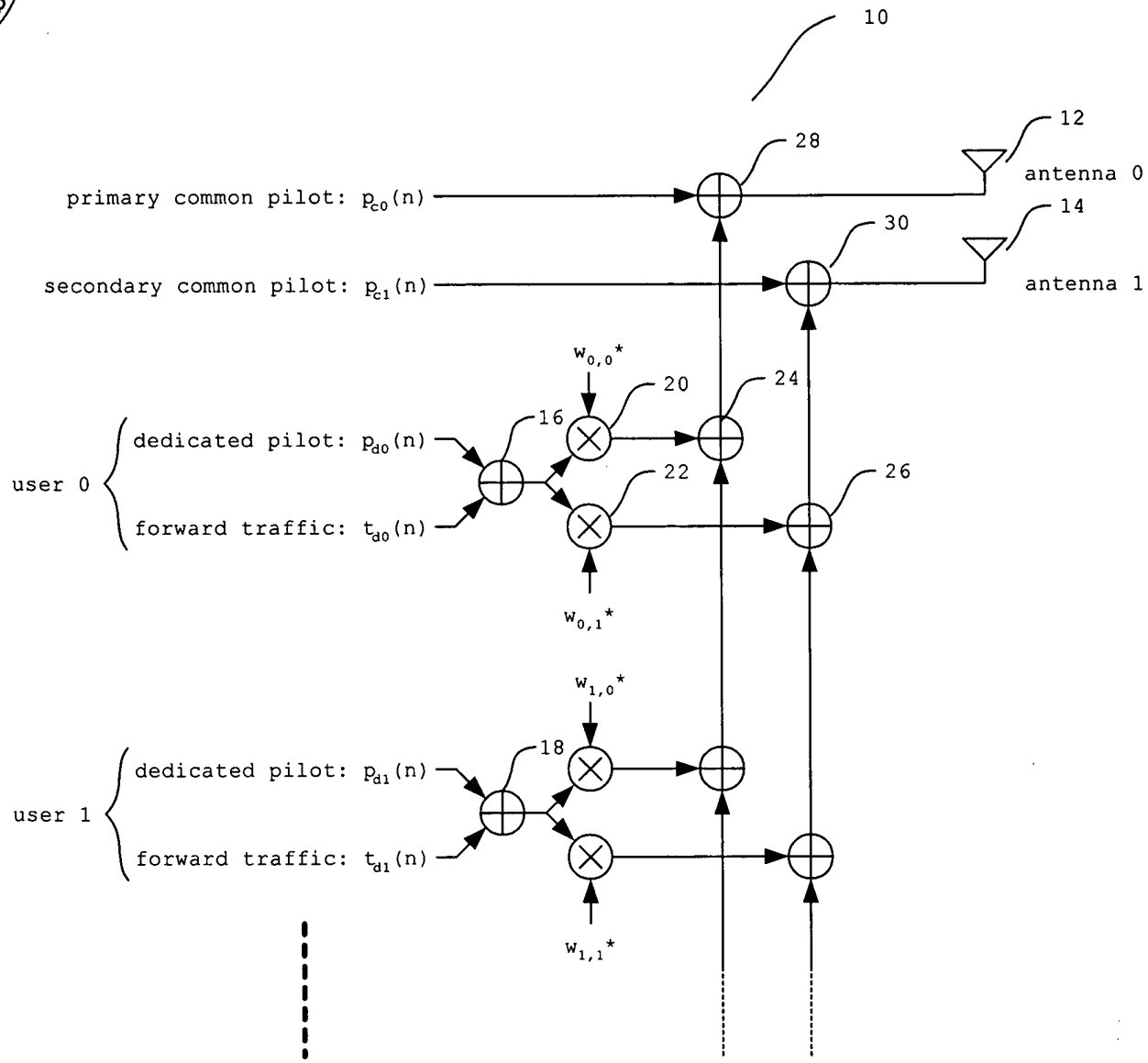

FIGURE 1
(Prior Art)

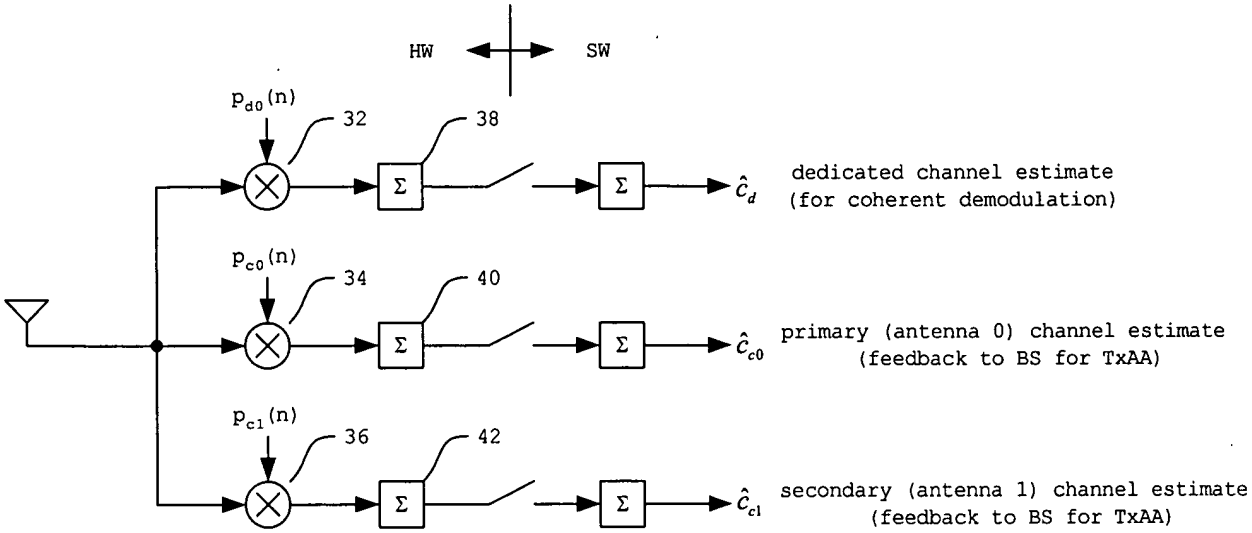

FIGURE 2
(Prior Art)

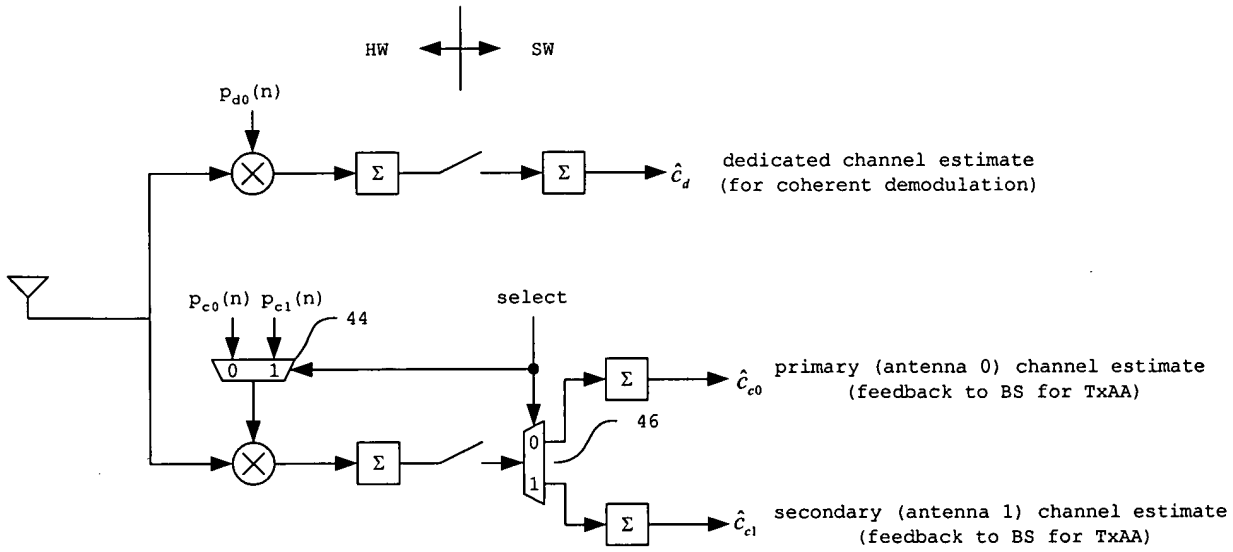

FIGURE 3
(Prior Art)

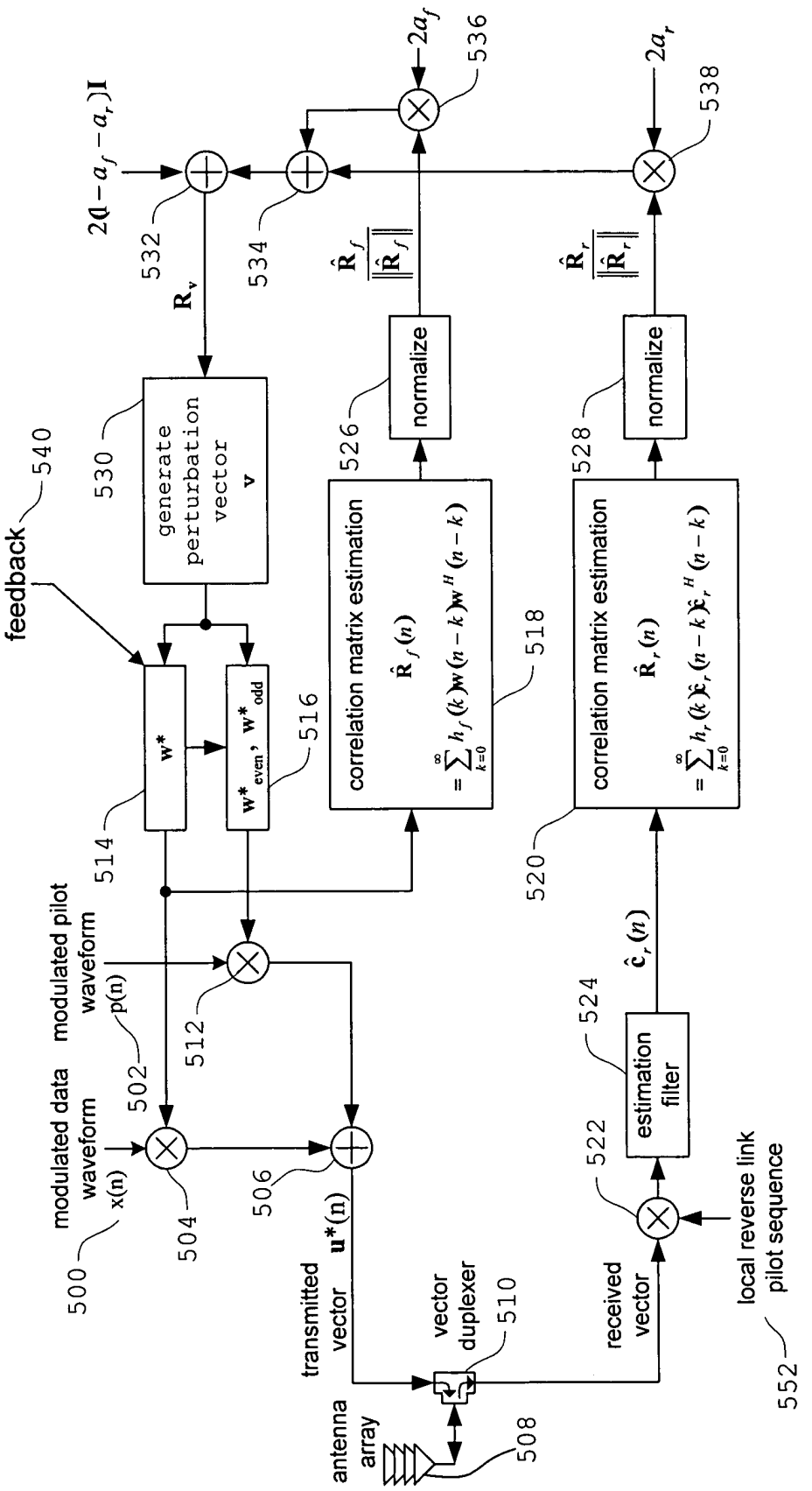
modulated data waveform
x(n)
500
modulated pilot waveform
p(n)
502
504
512
506
transmitted vector
u*(n)
vector duplexer
510
antenna array
508
feedback
540
generate perturbation vector
v
530
532
534
$2(1-a_f-a_r)\mathbf{I}$
$\mathbf{R}_v$
$2a_f$
536
$2a_r$
538
normalize
526
normalize
528
$\frac{\hat{\mathbf{R}}_f}{\|\hat{\mathbf{R}}_f\|}$
$\frac{\hat{\mathbf{R}}_r}{\|\hat{\mathbf{R}}_r\|}$
correlation matrix estimation
$\hat{\mathbf{R}}_f(n) = \sum_{k=0}^{\infty} h_f(k)\mathbf{w}(n-k)\mathbf{w}^H(n-k)$
518
correlation matrix estimation
$\hat{\mathbf{R}}_r(n) = \sum_{k=0}^{\infty} h_r(k)\hat{\mathbf{c}}_r(n-k)\hat{\mathbf{c}}_r^H(n-k)$
520
$\mathbf{w}^*$
514
$\mathbf{w}^*_{even}$, $\mathbf{w}^*_{odd}$
516
$\hat{\mathbf{c}}_r(n)$
524
estimation filter
522
received vector
local reverse link pilot sequence
552

FIGURE 11